

REMARKS

The specification is amended to correct the erroneous description of the I/O value of the cationic resin represented by formula (1) or (2) of "at least 2" to recite "not more than 2", which is supported on page 15, lines 15 to 18 of the specification.

Claim 1 is amended to incorporate the subject matter of original claims 4 and 5 (with the correction of the I/O value of the cationic resin as stated above), i.e., the monomer that provides the unit represented by Q or Z in the formula (1) or (2), respectively, is styrene or vinyl toluene and the I/O value of the cationic resin represented by the formula (1) or (2) is not more than 2 with a cation equivalent of at least 1.5 meq/g or more and no more than 4 meq/g. Claims 4 and 5 are canceled. No new matter is presented.

Accordingly, upon entry of the Amendment, claims 1-3 and 6-10 will be all of the claims pending in the application.

I. Response to Claim Rejections Over Kasahara et al under 35 U.S.C. § 102

Claims 1, 2 and 6-10 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Kasahara et al. (U.S. Pat. No. 6,165,606).

Claim 1 is amended to incorporate the subject matter of claims 4 and 5 (wherein the I/O value is not more than 2), which is not included in the rejection. Kasahara et al does not disclose the features of the presently claimed invention as recited in amended claim 1. Therefore the present invention is distinguished over Kasahara et al.

Accordingly, Applicants respectfully request withdrawal of the rejection under 35 U.S.C. § 102(b) over Kasahara et al.

II. Response to Claim Rejection under 35 U.S.C. §103 over Kasahara et al in view of Sugiyama et al

Claims 1, 2 and 5-10 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kasahara et al in view of Sugiyama et al (U.S. Pat. No. 6,773,770).

Claim 1 is amended to incorporate the subject matter of claim 4, which is not included in the rejection. The cited references, whether taken alone or in combination, do not teach or suggest the features of the presently claimed invention as recited in amended claim 1. Therefore the present invention is distinguished over Kasahara et al in view of Sugiyama et al.

Accordingly, Applicants respectfully request withdrawal of the rejection under 35 U.S.C. § 103(a) over Kasahara et al in view of Sugiyama et al.

III. Response to Claim Rejection under 35 U.S.C. § 102 over Kojima et al

Claims 1-4, 6-8 and 10 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Kojima et al. (U.S. Pat. No. 4,830,911).

Claim 1 is amended to incorporate the subject matter of claim 5 (wherein the I/O value is not more than 2), which is not included in the rejection. Kojima et al does not disclose the features of the presently claimed invention as recited in amended claim 1. Therefore the present invention is distinguished over Kojima et al.

Accordingly, Applicants respectfully request withdrawal of the rejection under 35 U.S.C. § 102(b) over Kojima et al.

IV. Response to Claim Rejection under 35 U.S.C. § 103 over Kojima et al in view of Sugiyama et al

Claims 1-10 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kojima et al in view of Sugiyama et al (U.S. Pat. No. 6,773,770).

Applicants respectfully traverse the rejection and submit that the cited references, whether taken alone or in combination, do not teach or suggest the presently claimed invention.

Claim 1 is amended herein to recite that the monomer that provides the unit represented by Q or Z in the formula (1) or (2), respectively, is styrene or vinyl toluene; the I/O value of the cationic resin represented by the formula (1) or (2) is not more than 2 with a cation equivalent of at least 1.5 meq/g or more and no more than 4 meq/g.

Kojima teaches an ink jet recording sheet that uses a water-soluble polymer which may include a styrene unit and/or a low-molecular alkyl methacrylate unit in an amount of less than 50 mol%.

However, Kojima fails to specifically teach, suggest or recognize that the use of a unit having less than 0.5 of I/O value (such as a styrene unit) as Z in formula (2) provides a significantly excellent time-dependent blurring suppression property compared to the use of a unit having equal to or more than 0.5 of I/O value (such as a low molecular alkyl methacrylate unit) as Z in formula (2) when q is in a range of 20 to 80% by mole. Further, Kojima fails to specifically teach or suggest that the use of a unit having less than 0.5 of I/O value as Z in formula (2) in a range of 20 to 80% by mole provides significantly excellent time-dependent

blurring suppression property compared to the use of a unit having less than 0.5 of I/O value as Z in formula (2) in a range of less than 20% by mole.

In relation to this, Applicants draw the Examiner's attention to the experimental data shown in Example 1 and Comparative Examples 3 and 4 in the specification of the present invention. The polymer used in Comparative Example 3 is the same as the polymer used in Example 4 of Kojima et al. The data in the specification shows that that the ink jet recording sheets (Examples 1 to 9) are excellent in image stability since blurring is suppressed under high temperature/high humidity conditions. In contrast, the comparative ink jet recording sheets produced without using the polymer of the invention could not suppress blurring from occurring under the high temperature/high humidity conditions.

Further, Applicants submit the enclosed Declaration under 37 C.F.R. § 1.132 which shows the calculated rate of change of the density used as the basis for the evaluation of time-dependent blurring suppression property listed in Table 1 on page 80 of the specification of the present invention. In the specification, Table 1 indicates the evaluated results by the grades "A", "B" and "C" for simplicity and ease of understanding. However, there are significantly large differences in the rate of change of the density calculated by taking variances of samples into account between the Comparative Examples and the Examples of the present invention as can be understood from the data provided in the Declaration. Thus, those skilled in the art would recognize that the present invention achieves unexpectedly remarkable results in comparison with the cited references.

In view of the above, the present invention is not obvious over the cited references. Accordingly, Applicants respectfully request withdrawal of the rejection under 35 U.S.C. § 103 over Kojima et al and Sugiyama et al.

V. Obviousness-Type Double Patenting Rejection

Claims 1-10 are rejected under the judicially created doctrine of obviousness-type double patenting as allegedly being unpatentable over claims 1-18 of U.S. Pat. No. 6,743,850.

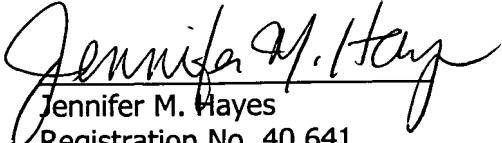
Applicants submit herewith a Terminal Disclaimer thereby obviating the obviousness-type double patenting rejection.

VI. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,


Jennifer M. Hayes
Registration No. 40,641

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

23373

CUSTOMER NUMBER

Date: October 24, 2005